

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A ~~one-time-compile~~ method in a compiler suitable for a speculation mechanism, wherein said compiler generates object codes for a processor having a speculative instruction and a speculative check instruction for checking a speculation failure (said speculative instruction and speculative check instruction are generally called a "speculation mechanism"), said ~~one-time-compile~~ method comprising the steps of:

(a) performing loop-duplication during compiling operation to generate first and second loops for a repetitively executed fragment of a source program;

~~(a)-(b)~~ generating first object codes using said speculation mechanism ~~from a repetitively executed fragment of a source program~~ as said first loop;

~~(b)-(c)~~ generating second object codes not using said speculation mechanism as said second loop from said repetitively executed fragment of said source program; and

~~(c)-(d)~~ generating third object codes that perform a control transfer of execution from said first loop to said second loop so that ~~after~~ if a number of times a speculation failure is detected by said speculative check instruction during execution of said first object codes satisfies a predetermined condition, said second object codes for said repetitively executed program fragment are executed.

2. (original) A compile method suitable for a speculation mechanism according to claim 1, wherein said predetermined condition in said step (c) is that the number of times a speculation failure is detected exceeds a predetermined value.

3. (original) A compile method suitable for a speculation mechanism according to claim 1, wherein said predetermined condition in said step (c) is that a ratio of the number of times a speculation failure is detected by the speculation check to a number of times the repetitively executed program fragment is executed exceeds a predetermined value.

4. (original) A compile method suitable for a speculation mechanism according to claim 1, wherein when a speculation failure is detected by the speculation check, a value of counter is incremented and when the counter value exceeds a predetermined value, said third object codes transfer control to execution of said second object codes.

5. (original) A compile method suitable for a speculation mechanism according to claim 1, wherein once said speculation failure is detected, said third object codes transfer control to execution of said second object codes.

6. (previously presented) A compiler program, tangibly stored on a computer readable medium, using said compile method according to claim 1.

7. (canceled)

8. (currently amended) A ~~one-time~~ compile method for generating an object program from a source program including repetitive loop processing, said ~~one-time~~ compile method comprising the steps of:

performing loop-duplication during compiling operation to generate first and second loops for a repetitively executed fragment of a source program;

generating first object codes from said source program by using a speculative instruction and a speculative check instruction for checking a speculation failure as said first loop;

generating second object codes from said source program without using said speculative instruction and said speculative check instruction as said second loop;

generating third object codes that perform control to first execute said first object codes;

generating fourth object codes to count a number of times the speculation failure occurs during execution of said first object codes; and

generating fifth object codes that perform control of execution from said first loop to said second loop to execute said second object codes after the number of times reaches a predetermined value.

9. (currently amended) A computer for generating an object program from a source program including repetitive loop processing, comprising:

a memory device to store said source program;

a central processing unit (CPU) to execute a compiler program for generating said object program from said source program;

a display device to output a result of compile processing executed by said CPU; and

a bus to connect said memory device, said CPU and said display device;

wherein said CPU generates said object program by executing a ~~one-time~~ compiler program that includes the steps of:

performing loop-duplication during compiling operation to generate first and second loops for a repetitively executed fragment of a source program;

generating first object codes from said source program by using a speculative instruction and a speculative check instruction for checking a speculation failure as said first loop;

generating second object codes from said source program without using said speculative instruction and said speculative check instruction as said second loop;

generating third object codes that perform control to first execute said first object codes;

generating fourth object codes to count a number of times a speculation failure occurs during execution of said first object codes; and

generating fifth object codes that perform control of execution from said first loop to said second loop to execute said second object codes after the number of times reaches a predetermined value.

10. (currently amended) An object program, tangibly embodied on a storage medium, generated at ~~one-time~~ compile from a source program including repetitive loop processing including:

a first object code portion generated from said source program by using a speculative instruction and a speculative check instruction for checking a speculation failure as said first loop;

a second object code portion generated from said source program without using said speculative instruction and said speculative check instruction as said second loop;

a third object code portion that performs control to first execute said first object code portion;

a fourth object code portion to count a number of times a speculation failure occurs during execution of said first object code portion; and

a fifth object code portion that performs control of execution from said first loop to said second loop to execute said second object code portion after the number of times reaches a predetermined value.

11. (canceled)